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10/612,701	07/02/2003	James Leonard Platt	AUS920030396US1	5875

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EXAMINER
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MAHMOOD, REZWANUL

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



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**Technology Center 2100**

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/612,701  
Filing Date: July 02, 2003  
Appellant(s): PLATT, JAMES LEONARD

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John Biggers  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed October 15, 2007 appealing from the Office action mailed May 18, 2007.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6212524	WEISSMAN	04-2001
20040210445	VERONESE	10-2004
20040236786	MEDICKE	11-2004

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Weissman (US Patent 6,212,524).

With respect to claim 1, Weissman discloses a method for populating a database, the method comprising:

providing a database having a schema (Weissman: Column 2, lines 26-38, and 66-67; Column 3, lines 1-2; Column 5, lines 26-32);

inferring from the schema dependencies among a fact table and related dimension tables (Weissman: Column 3, lines 1-2, and lines 36-38; Column 5, lines 26-32; Column 7, lines 42-49; Column 10, lines 24-42); and

inserting, in accordance with the dependencies, rows of data into the fact table and rows of data into the dimension tables (Weissman: Column 3, lines 1-11; Column 10, lines 24-42).

With respect to claim 7, Weissman discloses a system for populating a database, the system comprising:

means for providing a database having a schema (Weissman: Column 2, lines 26-38, and 66-67; Column 3, lines 1-2; Column 5, lines 26-32);

means for inferring from the schema dependencies among a fact table and related dimension tables (Weissman: Column 3, lines 1-2, and lines 36-38; Column 5, lines 26-32; Column 7, lines 42-49; Column 10, lines 24-42); and

means for inserting, in accordance with the dependencies, rows of data into the fact table and rows of data into the dimension tables (Weissman: Column 3, lines 1-11; Column 10, lines 24-42).

With respect to claim 13, Weissman discloses a computer program product for populating a database, the computer program product comprising:

a recording medium (Weissman: Figure 1);

means, recorded on the recording medium, for providing a database having a schema (Weissman: Column 2, lines 26-38, and 66-67; Column 3, lines 1-2; Column 5, lines 26-32);

means, recorded on the recording medium, for inferring from the schema

dependencies among a fact table and related dimension tables (Weissman: Column 3, lines 1-2, and lines 36-38; Column 5, lines 26-32; Column 7, lines 42-49; Column 10, lines 24-42); and

means, recorded on the recording medium, for inserting, in accordance with the dependencies, rows of data into the fact table and rows of data into the dimension tables (Weissman: Column 3, lines 1-11; Column 10, lines 24-42).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weissman (US Patent 6,212,524) in view of Veronese (US Publication 2004/0210445).

With respect to claim 2, Weissman discloses the method of claim 1 as set forth in the 35 U.S.C. 102 rejection above wherein inferring dependencies further comprises:

selecting from metadata describing a schema for the database expressions of dependencies (Weissman: Column 7, lines 23-29; Figure 1);

Weissman does not explicitly disclose:

inserting the expressions of dependencies into a dependency list.

The Veronese reference, however, discloses building a dependency list for the expressions of dependencies (Veronese: Paragraph 120, lines, 1-12).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to combine the teachings of Veronese with the teachings of Weissman to add a dependency list to insert the database expressions of dependencies to have new development methodologies, which will be both rapid and easily manageable and modifiable by the users (Veronese: Paragraph 11, lines 3-5) and to have an improved data warehousing technology (Weissman: Column 2, lines 61-62).

With respect to claim 8, Weissman in view of Veronese discloses the system of claim 7 wherein means for inferring dependencies further comprises:

means for selecting from metadata describing a schema for the database expressions of dependencies (Weissman: Column 7, lines 23-29; Figure 1); and

means for inserting the expressions of dependencies into a dependency list (Veronese: Paragraph 120, lines, 1-12).

With respect to claim 14, Weissman in view of Veronese a discloses the computer program product of claim 13 wherein means for inferring dependencies further comprises:

means, recorded on the recording medium, for selecting from metadata describing a schema for the database expressions of dependencies (Weissman: Column 7, lines 23-29; Figure 1); and

means, recorded on the recording medium, for inserting the expressions of dependencies into a dependency list (Veronese: Paragraph 120, lines, 1-12).

Claims 3-6, 9-12, and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weissman (US Patent 6,212,524) in view of Veronese (US Publication 2004/0210445) and further in view of Medicke (US Publication 2004/0236786).

With respect to claim 3, Weissman in view of Veronese discloses the method of claim 1 as set forth in the 35 U.S.C. 102 and 103 rejections above,

However, Weissman and Veronese does not explicitly disclose wherein inserting rows of data further comprises:

determining whether related dimension data exists for each foreign key in each row of data inserted into the fact table; and

for each foreign key for which related dimension data does not exist, inserting a row of dimension data into a dimension table related to the fact table through the foreign key.

The Medicke reference, however, discloses determining whether related dimension data exists for each foreign key in each row of data inserted into the fact table, and for each foreign key for which related dimension data does not exist, inserting a row of dimension data into a dimension table related to the fact table through the foreign key (Medicke: Paragraph 73, lines 10-27; Figure 7, and 9;

Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to combine the teachings of Medicke with the teachings of Weissman and Veronese to determine if dimension data exists for each foreign key in the fact table and inserting such data if it did not exist to generate a data warehouse by incorporating data warehouse information in business objects to provide subscribed business objects and generating star-schema tables of the data warehouse from the subscribed business objects (Medicke: Paragraph 9).

With respect to claim 4, Weissman in view of Veronese and in further view of Medicke discloses the method of claim 1 wherein inserting rows of data further comprises:

determining whether related dimension data exists for each foreign key in each row of data inserted into a first dimension table (Medicke: Paragraph 73, lines 10-27; Figure 7, and 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15); and

for each foreign key for which related dimension data does not exist, inserting a row of dimension data into a second dimension table related to the first dimension table through the foreign key (Medicke: Paragraph 73, lines 10-27; Figure 7, and 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15; Column 37, lines 30-35).

With respect to claim 5, Weissman in view of Veronese and in further view of Medicke discloses the method of claim 1 wherein inserting rows of data further comprises:

reading the rows of data from a first database, the first database comprising dependencies among tables in the database (Weissman: Column 9, lines 43-60); and inserting rows of data into a second database, the second database comprising at least the same dependencies as in the first database (Weissman: Column 10, lines 23-57; Medicke: Figure 9).

With respect to claim 6, Weissman in view of Veronese and in further view of Medicke discloses the method of claim 1 wherein a dependency comprises a rule for the database, enforced by a database management system, that a first record in a first table must exist in the database before a second record in a second table may be inserted in the database (Veronese: Paragraph 120, lines 1-12; Medicke: Paragraph 14, lines 8-10; Paragraph 65, lines 9-11).

With respect to claim 9, Weissman in view of Veronese and in further view of Medicke discloses the system of claim 7 wherein means for inserting rows of data further comprises:

means for determining whether related dimension data exists for each foreign key in each row of data inserted into the fact table (Medicke: Paragraph 73, lines 10-27; Figure 7, and 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15,

lines 1-15); and

for each foreign key for which related dimension data does not exist, means for inserting a row of dimension data into a dimension table related to the fact table through the foreign key (Medicke: Paragraph 73, lines 10-27; Figure 7, and 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15).

With respect to claim 10, Weissman in view of Veronese and in further view of Medicke discloses the system of claim 7 wherein means for inserting rows of data further comprises:

means for determining whether related dimension data exists for each foreign key in each row of data inserted into a first dimension table (Medicke: Paragraph 73, lines 10-27; Figure 7, and 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15); and

for each foreign key for which related dimension data does not exist, means for inserting a row of dimension data into a second dimension table related to the first dimension table through the foreign key (Medicke: Paragraph 73, lines 10-27; Figure 7, and 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15; Column 37, lines 30-35).

With respect to claim 11, Weissman in view of Veronese and in further view of Medicke discloses the system of claim 7 wherein means for inserting rows of data further comprises:

means for reading the rows of data from a first database, the first database comprising dependencies among tables in the database (Weissman: Column 9, lines 43-60); and

means for inserting rows of data into a second database, the second database comprising at least the same dependencies as in the first database (Weissman: Column 10, lines 23-57; Medicke: Figure 9).

With respect to claim 12, Weissman in view of Veronese and in further view of Medicke discloses the system of claim 7 wherein a dependency comprises a rule for the database, enforced by a database management system, that a first record in a first table must exist in the database before a second record in a second table may be inserted in the database (Veronese: Paragraph 120, lines 1-12; Medicke: Paragraph 14, lines 8-10; Paragraph 65, lines 9-11).

With respect to claim 15, Weissman in view of Veronese and in further view of Medicke discloses the computer program product of claim 13 wherein means for inserting rows of data further comprises:

means, recorded on the recording medium, for determining whether related dimension data exists for each foreign key in each row of data inserted into the fact table (Medicke: Paragraph 73, lines 10-27; Figure 7, and 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15); and

for each foreign key for which related dimension data does not exist, means,

recorded on the recording medium, for inserting a row of dimension data into a dimension table related to the fact table through the foreign key (Medicke: Paragraph 73, lines 10-27; Figure 7, and 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15).

With respect to claim 16, Weissman in view of Veronese and in further view of Medicke discloses the computer program product of claim 13 wherein means for inserting rows of data further comprises:

means, recorded on the recording medium, for determining whether related dimension data exists for each foreign key in each row of data inserted into a first dimension table (Medicke: Paragraph 73, lines 10-27; Figure 7, and 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15); and

for each foreign key for which related dimension data does not exist, means, recorded on the recording medium, for inserting a row of dimension data into a second dimension table related to the first dimension table through the foreign key (Medicke: Paragraph 73, lines 10-27; Figure 7, and 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15; Column 37, lines 30-35).

With respect to claim 17, Weissman in view of Veronese and in further view of Medicke discloses the computer program product of claim 13 wherein means for inserting rows of data further comprises:

means, recorded on the recording medium, for reading the rows of data from a

first database, the first database comprising dependencies among tables in the database (Weissman: Column 9, lines 43-60); and

means, recorded on the recording medium, for inserting rows of data into a second database, the second database comprising at least the same dependencies as in the first database (Weissman: Column 10, lines 23-57; Medicke: Figure 9).

With respect to claim 18, Weissman in view of Veronese and in further view of Medicke discloses the computer program product of claim 13 wherein a dependency comprises a rule for the database, enforced by a database management system, that a first record in a first table must exist in the database before a second record in a second table may be inserted in the database (Veronese: Paragraph 120, lines 1-12; Medicke: Paragraph 14, lines 8-10; Paragraph 65, lines 9-11).

#### **(10) Response to Argument**

Appellant's arguments regarding the rejection of claims 1-18:

**Argument A:** Weissman does not disclose each and every element of independent claims 1, 7, and 13. Weissman therefore cannot be said to anticipate the claims of the present application within the meaning of 35 U.S.C. § 102(b) (Page 5, Brief).

**Argument B:** Weissman does not disclose inferring from the schema dependencies among a fact table and related dimension tables (Page 5, Brief).

**Argument C:** Weissman does not disclose inserting rows of data into the tables

in accordance with the dependencies (Page 7, Brief).

**Argument D:** Because the proposed combination of Weissman and Veronese relies on the argument that Weissman discloses each and every elements of claims 1, 7, and 13, and because Weissman in fact does not discloses each and every element of claims 1, 7, and 13, the proposed combination of Weissman and Veronese cannot teach or suggest all the claim limitations of dependent claims 2, 8, and 14. The proposed combination of Weissman and Veronese, therefore, cannot establish a prima facie case of obviousness (Page 10, Brief).

**Argument E:** Because the proposed combination of Weissman, Veronese, and Medicke relies on the argument that Weissman discloses each and every element of claims 1, 7, and 13, and because Weissman in fact does not discloses each and every element of claims 1, 7, and 13, the proposed combination of Weissman, Veronese, and Medicke cannot teach or suggest all the claim limitations of dependent claims 3-6, 9-12, and 15-18. The proposed combination of Weissman, Veronese, and Medicke, therefore, cannot establish a prima facie case of obviousness (Page 11, Brief).

**Examiner's Response to Arguments:**

In response to Argument A:

Appellant discloses in independent claims 1, 7, and 13:

providing a database having a schema;

inferring from the schema dependencies among a fact table and related dimension tables; and

inserting, in accordance with the dependencies, rows of data into the fact table

and rows of data into the dimension tables.

Appellant argues that Weissman does not disclose each and every element of independent claims 1, 7, and 13.

The Weissman patent teaches:

A datamart having data that is organized according to a schema, the datamart including tables having rows and columns. The schema defines the relationships between the tables and columns (Weissman: Column 2, lines 26-38 and 66-67; Column 3, lines 1-2; Column 5, lines 26-32).

Here Weissman discloses a database having a schema.

A schema can be easily defined for the datamart. The schema is a star schema which has one or more fact tables and one or more dimension tables wherein the schema defines the relationships between the tables and columns. From the schema definition, the system automatically builds the tables needed in the datamart (Weissman: Column 3, lines 1-2 and lines 36-38; Column 5, lines 26-32; Column 7, lines 23-49; Column 10, lines 24-42).

Here Weissman discloses inferring from the schema dependencies among a fact table and related dimension tables.

The schema description defines how a data is to be manipulated and used to populate tables in a datamart. The description is used to create a set of commands to create the tables. The description is further user to define the semantic meaning of the data. When the semantic meaning is associated with the column and rows, programs for manipulating and propagating data into those columns and rows are automatically

defined. From the schema description, the system automatically builds the tables needed in the datamart (Weissman: Column 3, lines 1-11 and 36-38; Column 5, lines 26-32; Column 7, lines 23-49; Column 10, lines 24-42).

Here Weissman discloses inserting accordance with the dependencies, rows of data into tables which are fact tables and dimension tables.

Thus, Weissman clearly shows each and every element of the independent claims 1, 7, and 13.

In response to Argument B:

Appellant argues that Weissman does not disclose inferring from the schema dependencies among a fact table and related dimension tables.

Weissman discloses metadata describing a schema definition for a datamart which defines the dependencies between the tables and columns and how data is to be manipulated and used to populate the tables in the datamart. The schema is a star schema which has one or more fact tables and one or more dimension tables wherein the schema defines the relationships between the tables and columns. The consultant can define a schema for the datamart which is kept in the schema definitions. From the schema definition, the system automatically builds the tables needed in the datamart. Thus the system infers from the schema dependencies among a fact table and related dimension tables (Weissman: Column 3, lines 1-11 and 36-38; Column 5, lines 26-32; Column 7, lines 23-49; Column 10, lines 24-42; Figure 1).

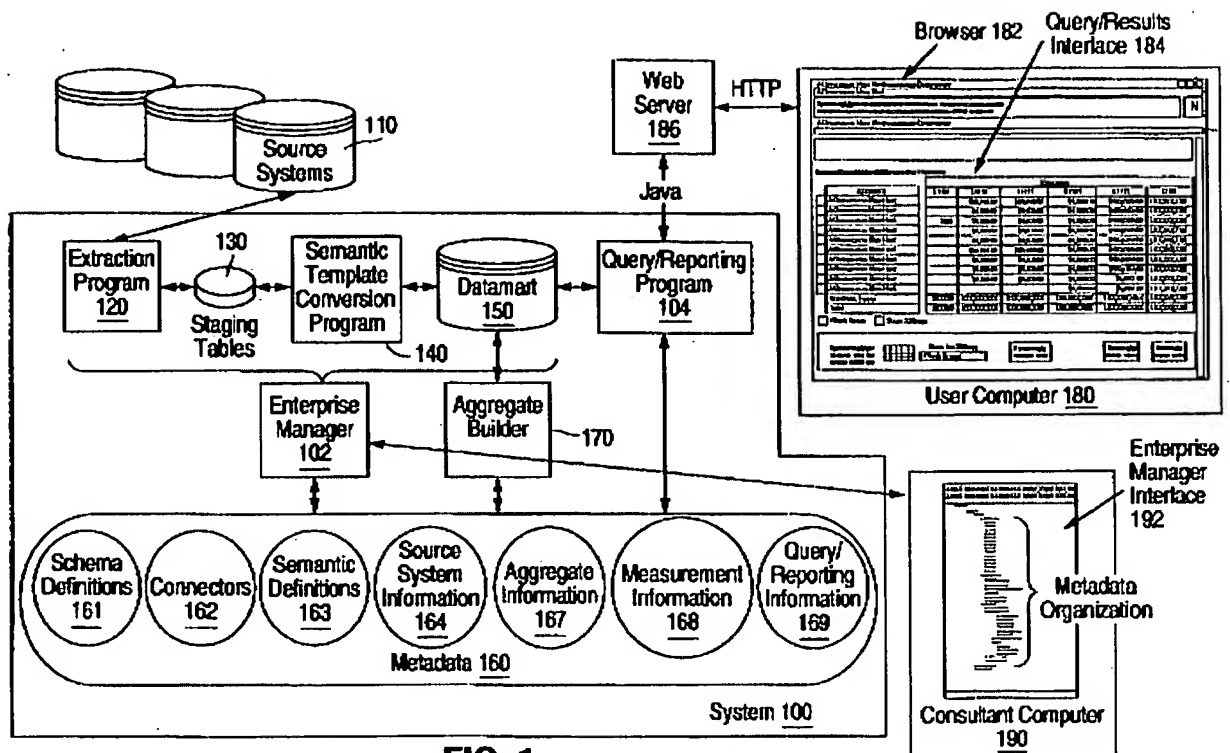


FIG. 1

In response to Argument C:

Appellant argues that Weissman does not disclose inserting rows of data into the tables in accordance with the dependencies.

Weissman discloses the schema description defining how a data is to be manipulated and used to populate tables in a datamart. The description is used to create a set of commands to create the tables. The description is further user to define the semantic meaning of the data. When the semantic meaning is associated with the column and rows, programs for manipulating and propagating data into those columns

and rows are automatically defined. From the schema description, the system automatically builds the tables needed in the datamart (Weissman: Column 3, lines 1-11 and 36-38; Column 5, lines 26-32; Column 7, lines 23-49; Column 10, lines 24-42).

In response to Arguments D and E:

In response to appellant's argument, a *prima facie case of obviousness* is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art. Once such a case is established, it is incumbent upon appellant to go forward with objective evidence of unobviousness. In re Fielder, 471 F.2d 640, 176 USPQ 300 (CCPA 1973).

Examiner is entitled to give claim limitations their broadest reasonable interpretation in light of the specification. See MPEP 2111 [R-1]

During patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969).

Since, Weissman in fact does disclose each and every element of claims 1, 7, and 13, the proposed combination of Weissman and Veronese teaches or suggests all the claim limitations of dependent claims 2, 8, and 14. The proposed combination of Weissman and Veronese, therefore, establish a *prima facie case of obviousness* (Please refer to response to arguments A and further please refer to 35 U.S.C. 102(b) and 103(a) rejections as described above).

Since, Weissman in fact does disclose each and every element of claims 1, 7, and 13, the proposed combination of Weissman, Veronese, and Medicke teaches or suggests all the claim limitations of dependent claims 3-6, 9-12, and 15-18. The proposed combination of Weissman, Veronese, and Medicke, therefore, establish a prima facie case of obviousness (Please refer to response to arguments A and further please refer to 35 U.S.C. 102(b) and 103(a) rejections as described above).

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

In view of the above, the examiner contends that all limitations as recited in the claims and as argued have been addressed in this Office Action.

For the above reasons, it is believed that the rejections should be sustained.



CHARLES RONES  
SUPERVISORY PATENT EXAMINER

Application/Control Number:  
10/612,701  
Art Unit: 2164

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Respectfully submitted,

  
Rezwanul Mahmood

Examiner, Art Unit 2164

January 3, 2008

  
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SUPERVISORY PATENT EXAMINER

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